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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known	
Application Number	10/660/976			
Filing Date	09/11/2003			
First Named Inventor	Franco Vitaliano			
Group Art Unit	1631			
Examiner Name	Russell S. Negin			
Attorney Docket Number				

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U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		7,112,330		Buonamassa, et al	09/26/2006	
		7,105,303		Ralston, et al	09/12/2006	
		7,094,409		Bachmann, et al	08/22/2006	
		RE39,229		Choo, et al	08/08/2006	
		7,060,291		Meers, et al	06/13/2006	
		7,063,860		Chancellor, et al	06/20/2006	
		7,048,949		Sligar, et al	05/23/2006	
		7,112,337		Huang, et al	09/26/2006	
		7,108,863		Zalipsky, et al	09/19/2006	
		7,101,570		Hope, et al	09/05/2006	
		7,101,532		Aikawa, et al	09/05/2006	
		7,037,520		Smyth Templeton	05/02/2006	
		7,033,834		Valerio, et al	04/25/2006	
		7,108,915		Adams, et al	09/19/2006	
		7,113,967		Cleve, et al.	09/26/2006	
		7,113,598		Flusberg, et al.	09/26/2006	
		7,019,875		Pittman, et al.	03/28/2006	

FOREIGN PATENT DOCUMENTS								
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		W. ALT, ET AL; A NEUTRAL ATOM QUANTUM REGISTER; INSTITUT FÜR ANGEWANDTE PHYSIK DER UNIVERSITÄT BONN, 2004	
		L. F. WEI, AND F. NORI; COHERENTLY MANIPULATING TWO-QUBIT QUANTUM INFORMATION USING A PAIR OF SIMULTANEOUS LASER PULSES; EUROPHYS. LETT., 65 (1), PP. 1-6 (2004) DOI: 10.1209/EPL/2003-10053-Y, EUROPHYSICS LETTERS	
		CHRISTIAN F. ROOS, ET AL; CONTROL AND MEASUREMENT OF THREE-QUBIT ENTANGLED STATES; 4 JUNE 2004 VOL 304 SCIENCE	
		H. C. NAGERL, ET AL; LASER ADDRESSING OF INDIVIDUAL IONS IN A LINEAR ION TRAP; PHYSICAL REVIEW A VOLUME 60, NUMBER 1 JULY 1999	
		SAMUEL L. BRAUNSTEIN AND JOHN A. SMOLIN (AUGUST 28, 2006); PERFECT QUANTUM ERROR CORRECTION CODING IN 24 LASER PULSES; ARXIV:QUANT-PH/9604036 V2 22 OCT 1996	
		DEBABRATA GOSWAMI; QUANTUM COMPUTATION WITH ULTRAFAST LASER PULSE SHAPING; RESONANCE, JUNE 2005	
		J. J. GARCIA-RIPOLL, ET AL; SPEED OPTIMIZED TWO-QUBIT GATES WITH LASER COHERENT CONTROL TECHNIQUES FOR ION TRAP QUANTUM COMPUTING; VOLUME 91, NUMBER 15, PHYSICAL REVIEW LETTERS, 10 OCTOBER 2003	
		W J MUNRO, K NEMOTO AND T P SPILLER; WEAK NONLINEARITIES: A NEW ROUTE TO OPTICAL QUANTUM COMPUTATION; NEW JOURNAL OF PHYSICS 7 (2005) 137, 27 MAY 2005	
		ALIVISATOS, AP; SEMICONDUCTOR CLUSTERS, NANOCRYSTALS, AND QUANTUM DOTS; SCIENCE, PP. 933-937, 1996	
		ARTEMYEV, M. V. WOGGON, QUANTUM DOTS IN PHOTONIC DOTS, APPLIED PHYSICS LETTERS, 2000	

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		BROWN, K.R., D. A. LIDAR, AND K. B. WHALEY, QUANTUM COMPUTING WITH QUANTUM DOTS ON QUANTUM LINEAR SUPPORTS, PHYSICAL REVIEW A, VOLUME 65, 2001	
		DEBRAY, P. ET AL. BALLISTIC ELECTRON TRANSPORT IN STUBBED QUANTUM WAVEGUIDES: EXPERIMENT AND THEORY. PHYS. REV. B 61, 10950±10958 (2000).	
		SANTORI, ET AL; INDISTINGUISHABLE PHOTONS FROM A SINGLE-PHOTON DEVICE; LETTERS TO NATURE, 2002; YAMAMOTO QUANTUM ENTANGLEMENT PROJECT, ICORP, JST, E. L. GINZTON LABORATORY, STANFORD UNIVERSITY).	
		HARNEIT, W., FULLERENE-BASED ELECTRON-SPIN QUANTUM COMPUTER, PHYSICAL REVIEW A, VOLUME 65, 032322, RECEIVED 11 OCTOBER 2001; PUBLISHED 27 FEBRUARY 2002	
		REPORT OF THE NSF WORKSHOP, QUANTUM INFORMATION SCIENCE, AN EMERGING FIELD OF INTERDISCIPLINARY RESEARCH AND EDUCATION IN SCIENCE AND ENGINEERING, OCTOBER 28-29, 1999 ARLINGTON, VIRGINIA	
		MICHLER,P., KIRAZ, A., A QUANTUM DOT SINGLE-PHOTON TURNSTILE DEVICE, SCIENCE, DEC. 2000	
		KNILL, LAFLAMME, MILBURN, EFFICIENT LINEAR OPTICS QUANTUM COMPUTATION, NATURE 409, 46, 2001)	
		MICHLER, P., A. , ET AL; QUANTUM CORRELATION AMONG PHOTONS FROM A SINGLE QUANTUM DOT AT ROOM TEMPERATURE, NATURE, AUGUST 2000	
		RALPH, T.C, ET AL; SIMPLE SCHEME FOR EFFICIENT LINEAR OPTICS QUANTUM GATES, PHYSICAL REVIEW A, VOLUME 65, DECEMBER 2001	
		BRUN, T., WANG. H., COUPLING NANOCRYSTALS TO A HIGH-Q SILICA MICROSPHERE: ENTANGLEMENT IN QUANTUM DOTS VIA PHOTON EXCHANGE, ARXIV:QUANT-PH/9906025	
		LIANG, ET AL: FABRY-PEROT INTERFERENCE IN A NANOTUBE ELECTRON WAVEGUIDE, LETTER TO NATURE, NATURE, VOL. 411, 7 JUNE 2001	

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		MEKIS, A., J. ET AL;RAY CHAOS AND Q-SPOILING IN LASING DROPLETS, PHYS. REV. LETT. 75, 2682 (1995)	
		NOCKEL, J. U., ET AL; Q-SPOILING AND DIRECTIONALITY IN DEFORMED RING CAVITIES, OPTICS LETTERS 19, 1693 (1994)	
		NOCKEL, JENS., A. DOUGLAS STONE, CHAOTIC LIGHT: A THEORY OF ASYMMETRIC RESONANT CAVITIES ARXIV:PHYSICS/0203063 V1 21 (MAR 2002)	

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